

WHAT IS CLAIMED IS:

- 1 1. A plant comprising a recombinant expression cassette, the
2 expression cassette comprising a promoter and a nucleic acid sequence encoding an
3 inhibitor of a farnesyltransferase.
- 1 2. A plant of claim 1, wherein said promoter is a promoter
2 preferentially expressed in guard cells.
- 1 3. A plant of claim 1, wherein said inhibitor is a protein.
- 1 4. A seed containing a nucleic acid construct of claim 1.
- 1 5. A cell or tissue culture containing a nucleic acid construct of claim
2 1.
- 1 6. A plant regenerated from a cell or tissue culture of claim 5.
- 1 7. A method of inhibiting farnesyltransferase in a plant, comprising
2 introducing into a plant a recombinant expression cassette comprising a promoter
3 operably linked to a nucleic acid encoding an inhibitor of farnesyltransferase, whereby
4 the inhibitor is expressed in said plant.
- 1 8. A method of claim 7, wherein the promoter is specific for
2 expression in guard cells.
- 1 9. A method of claim 7, wherein the inhibitor is an inhibitor of the
2 farnesyltransferase alpha-subunit.
- 1 10. A method of claim 7, wherein the inhibitor is an inhibitor of the
2 farnesyltransferase beta-subunit.
- 1 11. A method of claim 7, wherein said inhibitor is a protein.
- 1 12. A method of claim 7, wherein the recombinant expression cassette
2 is introduced into the plant by *Agrobacterium*.

1 13. A method of claim 7, wherein the recombinant expression cassette
2 is introduced into the plant by contacting the plant with nucleic acid coated- or
3 containing- microparticles.

1 14. A method of claim 7, wherein the recombinant expression cassette
2 is introduced into the plant by sexual cross.

1 15. A method of inhibiting farnesyltransferase in a plant, comprising
2 introducing into a plant an isolated nucleic acid complementary to at least 30 nucleotides
3 of a nucleic acid sequence encoding farnesyltransferase, thereby interfering with the
4 expression of farnesyltransferase.

1 16. A method of claim 15, wherein the isolated nucleic acid is
2 complementary to an alpha-subunit of farnesyltransferase.

1 17. A method of claim 15, wherein the isolated nucleic acid is
2 complementary to a beta-subunit of farnesyltransferase.

1 18. A method of inhibiting farnesyltransferase in a plant, comprising
2 contacting the plant with an inhibitor of farnesyltransferase, whereby the inhibitor inhibits
3 farnesyltransferase in the plant.

1 19. The method of claim 18, wherein irrigation water comprising the
2 inhibitor contacts the plant.

1 20. The method of claim 18, wherein the inhibitor contacts the plant
2 through foliar application.

1 21. The method of claim 18, wherein the inhibitor is manumycin.

1 22. The method of claim 18, wherein the inhibitor is α -
2 hydroxyfarnesylphosphonic acid.

1 23 A method of producing a plant with reduced farnesyltransferase
2 activity, comprising mutating a promoter region of a nucleic acid sequence encoding
3 farnesyltransferase and selecting mutants with reduced expression of farnesyltransferase.

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